

**NEW VARIETIES****Co 0403: An early variety for Peninsular zone of India**

Co 0403 was notified by the Central Varietal Release Committee in 2012 for cultivation in Peninsular India. Evolved from the cross Co 8371 x Co 86011, this variety showed superiority in a set of two plant and ratoon crop trials conducted at 11 AICRP centers. Its cane yield was 101.5 t/ha and juice sucrose was 18.16% (at 300 days in plant crops and 270 days in ratoon crop). The clear superiority of Co 0403 was indicated by 14.86% improvement for CCS yield and 16.52% for cane yield over the standard CoC 671. The variety showed superiority for cane yield, CCS yield, CCS% and sucrose % over the other two standards despite a slightly lower juice quality than that of CoC 671. This variety figured among the top three positions in 27 trials for CCS yield, 22 trials for cane yield, 25 trials for both CCS % and sucrose %, thus exhibiting its superiority in the zone.

Co 0403 performed better than the best zonal standard at Coimbatore, Akola, Kolhapur, Navasari, Padegaon, Pugalur, Sameervadi and Sankeshwar for CCS t/ha. It ranked first at Akola, Navasari, Padegaon, Pravaranagar and second at Kolhapur, Mandya, Pugalur, Sameervadi and Sankeshwar for cane yield. The variety was the best at Kolhapur, Padegaon and Sankeshwar and second best at Coimbatore, Mandya, Sameerwadi and Thiruvalla for CCS%; it was the best at Kolhapur, Mandya, Padegaon and Sankeshwar for sucrose %.

The variety is resistant to red rot and smut and moderately tolerant to drought. The diagnostic morphological features are purple, heavily wax coated, medium thick canes without spines and splits, with cylindrical internodes and green growth ring. The clone has impressive field stand with high cane population, erectness, early vigorous growth and dark green foliage.

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**CoSnk 03044 (SNK 044)**

The variety was released for Karnataka State in 2007 for cultivation in sugarcane white woolly aphid endemic areas as a resistant variety. Developed from the cross Co 740 X CoA 7602, the clone was selected under north Karnataka conditions at the Sugarcane Research Station, Sankeshwar. This was registered with NBPGR, New Delhi, as a unique germplasm with the number assigned as INGR 07038.

The clone registered high plant and ratoon cane yields (125-150 MT/ha) and better sugar recovery of 11.8% with early maturity. Cane yield and sugar yield recorded 20-25% increase over the early standard CoC 671. The variety is resistant to red rot and smut, and is capable of withstanding moisture stress.

The distinguishing morphological characters include thick, green, solid, cylindrical zigzag internodes without splits, presence of bud groove, lanceolate ligular process on one side extending to 2-2.5 cm with open drooping canopy.

**CoSnk 05103 (SNK 049)**

This was released as an early maturing variety for Peninsular India in the year 2011. The clone was bred from the cross Co 740 X CoA 7602. In the AICRP trials, this variety ranked one across different locations of Peninsular Zone over two plant and one ratoon crops for cane yield (105.5 t/ha) and sugar yield (12.85 t/ha). The variety recorded 20% and 11% increase in cane and sugar yield respectively over the best check CoC 671. The clone is resistant to red rot and smut diseases, resistant to woolly aphid tolerant to moisture stress and water logging. Major diagnostic characters are its greenish yellow stem, heavy waxiness in the internodes and open drooping carriage.

**CoSnk 05104 (SNK 814)**

This was also released in 2011 as a midlate maturing variety for the Peninsular zone of India. Its parentage is CoC 771 PC. In AICRP trials of Peninsular Zone, this clone was ranked one for cane and sugar yields. This was significantly superior in cane yield (104.8 t/ha) and exhibited 16.88% increase over best check

Co 86032 (90.73 t/ha) and 25.77% over another check Co 7219 (83.93 t/ha) in two plant and one ratoon crops across different locations of Peninsular Zone of India. CoSnk 05104 was significantly superior in CCS (sugar) yield (13.04 t/ha) and exhibited 8.66% increase over best check Co 86032 (12.00 t/ha) and 16.63% over another check Co 7219 (11.18 t/ha) in two plant and one ratoon crops across different locations of Peninsular Zone of India. The variety possesses resistance against red rot and smut diseases and has wider adaptability as it possesses better tolerance against moisture and salinity-water log complex stresses. Major diagnostic characters include light pink colored stem, heavy internode waxiness, yellowish pink root zone, zigzag internodes and green leaf sheath with purple tinge.

#### **CoSnk 03632 (SNK 632)**

The variety was released for Karnataka State in 2012. Developed from the polycross of Co 8013, this clone was high yielding (130 - 180 t/ha), sugar

rich (> 12% sugar recovery) and suitable for early (July- October) planting and harvesting before mid January. This is also suitable for jaggery/organic jaggery production. This variety recorded 20% improvement for cane yield and 15% improvement for sugar yield over Co 86032. Moisture stress tolerance, good ratooning ability, moderately susceptible reaction to red rot and moderately resistant reaction to smut are the other features. Semi-erect stool habit, pink coloured canes in the exposed regions, pink root zone, presence of ivory marks and weather marks, cylindrical internodes, medium pithiness of canes and medium sized buds, yellowish green growth ring and self stripping leaves are the major morphological characters.

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